

Bolt, Nut, Screw, Rivet, and Washer Manufacturing: 2002

Issued January 2005

EC02-311-332722 (RV)

2002 Economic Census

Manufacturing

Industry Series



USCENSUSBUREAU

Helping You Make Informed Decisions

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU



CONTENTS

Introduction to the Economic Census	v
Manufacturing	ix

Tables

1. Historical Statistics for the Industry: 2002 and Earlier Years ...	1
2. Industry Statistics for Selected States: 2002	2
3. Detailed Statistics by Industry: 2002	3
4. Industry Statistics by Employment Size: 2002.....	4
5. Industry Statistics by Primary Product Class Specialization: 2002	5
6a. Products Statistics: 2002 and 1997	6
6b. Product Class Shipments for Selected States: 2002 and 1997 .	8
7. Materials Consumed by Kind: 2002 and 1997.....	10

Appendixes

A. Explanation of Terms	A-1
B. NAICS Codes, Titles, and Descriptions	B-1
C. Methodology	C-1
D. Geographic Notes	--
E. Metropolitan and Micropolitan Statistical Areas	--
F. Comparability of Product Classes and Product Codes: 2002 to 1997	F-1

-- Not applicable for this report.

Table 1. Historical Statistics for the Industry: 2002 and Earlier Years

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year ¹	Com- panies ²	All estab- lish- ments ³	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)	
			Number ⁴	Payroll (\$1,000)	Number ⁴	Hours (1,000)	Wages (\$1,000)					
332722, Bolt, nut, screw, rivet, and washer manufacturing	2002..	835	964	44 761	1 794 941	33 332	69 335	1 155 310	4 451 998	3 329 812	7 782 829	'307 194
	2001..	N	N	51 834	1 975 217	39 428	81 463	1 287 688	4 585 213	3 381 934	8 070 010	271 038
	2000..	N	N	53 504	2 122 215	40 550	85 601	1 389 560	5 013 204	3 694 554	8 720 384	397 304
	1999..	N	N	55 336	2 087 157	41 878	88 487	1 368 550	4 979 966	3 663 284	8 654 807	374 747
	1998..	N	N	56 334	2 046 182	42 434	89 197	1 331 084	5 088 138	3 748 493	8 766 232	351 610
	1997..	913	1 041	53 342	1 952 584	39 874	84 970	1 236 422	4 711 843	3 523 376	8 208 031	396 430

¹Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

²For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

³Includes establishments with payroll at any time during the year.

⁴Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 2. Industry Statistics for Selected States: 2002

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments ²		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
332722, Bolt, nut, screw, rivet, and washer manufacturing												
United States	2	964	456	44 761	1 794 941	33 332	69 335	1 155 310	4 451 998	3 329 812	7 782 829	'307 194
Alabama	—	12	9	685	26 104	402	830	10 677	83 136	98 652	178 557	'12 948
Arizona	2	8	3	272	12 806	215	496	8 737	30 558	14 004	44 974	'669
Arkansas	—	7	2	167	5 132	102	222	2 971	12 111	10 209	22 627	'211
California	3	133	55	7 186	317 968	5 074	10 846	186 616	744 517	329 371	1 067 305	'24 957
Colorado	—	7	3	307	12 126	213	431	6 475	27 640	18 564	46 072	'2 015
Connecticut	—	40	16	1 049	43 396	712	1 450	23 710	94 266	36 899	129 773	'5 779
Florida	7	18	4	531	18 702	394	863	11 364	37 054	22 586	60 478	'1 416
Georgia	4	8	4	204	9 151	133	264	4 747	22 512	11 146	33 669	'691
Illinois	2	126	71	7 362	303 725	5 432	11 555	198 419	741 854	575 071	1 315 759	'74 318
Indiana	—	30	17	1 826	67 488	1 474	2 916	48 066	184 493	183 991	378 751	'14 383
Iowa	—	5	4	632	19 179	581	1 207	16 230	59 644	31 604	93 105	'1 170
Kentucky	—	12	10	716	22 860	531	1 088	15 004	86 416	77 890	163 651	'9 924
Massachusetts	—	30	12	978	40 211	687	1 345	22 343	90 930	78 031	171 588	'3 694
Michigan	3	100	58	4 636	195 912	3 409	7 317	130 843	639 596	646 129	1 277 859	'35 053
Minnesota	4	12	5	430	16 137	318	515	9 815	37 984	17 666	55 711	'1 746
Missouri	4	15	8	362	13 346	269	540	8 605	33 188	18 472	51 621	'1 111
New Hampshire	—	7	5	200	7 490	138	296	4 411	13 689	6 798	20 768	'1 213
New Jersey	4	28	11	1 103	37 261	871	1 764	25 139	85 831	66 619	154 622	'4 781
New York	2	47	13	1 060	41 770	695	1 337	21 839	109 630	75 032	180 212	'3 270
North Carolina	1	8	3	526	16 542	432	911	12 421	23 148	33 660	59 599	'381
Ohio	2	84	47	4 205	170 337	3 142	6 739	110 146	337 911	324 984	659 854	'58 434
Oklahoma	9	5	3	313	15 509	253	576	11 439	32 141	24 154	54 608	'2 227
Oregon	4	10	3	138	5 428	109	219	4 018	11 195	8 336	20 203	'428
Pennsylvania	2	50	20	3 391	145 241	2 737	5 596	107 334	329 445	159 998	503 085	'10 657
Rhode Island	1	14	7	383	12 962	259	526	7 335	26 375	12 132	39 044	'1 719
South Carolina	1	9	3	206	7 017	167	372	4 841	32 419	17 065	48 040	'734
Tennessee	—	20	10	1 166	40 440	929	1 738	26 492	97 192	87 843	185 958	'5 331
Texas	1	43	17	1 652	60 846	1 268	2 661	41 856	137 982	100 706	237 483	'8 875
Virginia	1	6	5	683	20 369	541	1 183	14 552	55 617	51 588	106 106	'2 648
Wisconsin	1	31	14	1 266	44 978	1 020	1 889	31 655	139 067	133 731	268 735	'8 774

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 3. Detailed Statistics by Industry: 2002

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
332722, Bolt, nut, screw, rivet, and washer manufacturing	
Companies ¹	number.. 835
All establishments ²	number.. 964
Establishments with 1 to 19 employees	number.. 508
Establishments with 20 to 99 employees	number.. 328
Establishments with 100 employees or more	number.. 128
All employees ³	number.. 44 761
Total compensation	\$1,000.. 2 267 783
Annual payroll	\$1,000.. 1 794 941
Total fringe benefits	\$1,000.. 472 842
Production workers, average for year	number.. 33 332
Production workers on March 12	number.. 33 312
Production workers on May 12	number.. 33 431
Production workers on August 12	number.. 33 334
Production workers on November 12	number.. 33 153
Production worker hours	1,000.. 69 335
Production worker wages	\$1,000.. 1 155 310
Total cost of materials	\$1,000.. 3 329 812
Materials, parts, containers, packaging, etc., used	\$1,000.. 2 397 266
Resales	\$1,000.. 290 119
Purchased fuels	\$1,000.. 32 780
Purchased electricity	\$1,000.. 90 649
Contract work	\$1,000.. 518 998
Quantity of electricity purchased for heat and power	1,000 kWh.. 1 309 236
Quantity of electricity generated less sold for heat and power	1,000 kWh.. D
Total value of shipments	\$1,000.. 7 782 829
Primary products value of shipments	\$1,000.. 7 000 723
Secondary products value of shipments	\$1,000.. 354 915
Total miscellaneous receipts	\$1,000.. 427 191
Value of resales	\$1,000.. 387 778
Contract receipts	\$1,000.. 20 323
Other miscellaneous receipts	\$1,000.. 19 090
Primary products specialization ratio	percent.. 95
Value of primary products shipments made in all industries	\$1,000.. 7 172 324
Value of primary products shipments made in this industry	\$1,000.. 7 000 723
Value of primary products shipments made in other industries	\$1,000.. 171 601
Coverage ratio	percent.. 98
Value added	\$1,000.. 4 451 998
Total inventories, beginning of year	\$1,000.. 1 162 462
Finished goods inventories	\$1,000.. 603 605
Work-in-process inventories	\$1,000.. 297 317
Materials and supplies inventories	\$1,000.. 262 578
Total inventories, end of year	\$1,000.. 1 169 573
Finished goods inventories	\$1,000.. 614 597
Work-in-process inventories	\$1,000.. 285 306
Materials and supplies inventories	\$1,000.. 270 903
Gross value of depreciable assets (acquisition costs) at beginning of year	\$1,000.. '4 044 794
Total capital expenditures (new and used)	\$1,000.. '307 194
Buildings and other structures (new and used)	\$1,000.. '51 611
Machinery and equipment (new and used)	\$1,000.. '255 583
Automobiles, trucks, etc., for highway use	\$1,000.. '7 792
Computers and peripheral data processing equipment	\$1,000.. '22 409
All other expenditures for machinery and equipment	\$1,000.. '225 382
Total retirements	\$1,000.. '208 974
Gross value of depreciable assets at end of year	\$1,000.. '4 143 014
Depreciation charges during year	\$1,000.. '255 113
Total rental payments	\$1,000.. 103 979
Buildings and other structures	\$1,000.. 66 624
Machinery and equipment	\$1,000.. 37 355
Total other expenses ⁴	\$1,000.. 520 938
Response coverage ratio ⁵	percent.. 80
Repair and maintenance services of buildings and/or machinery ⁴	\$1,000.. 68 290
Communications services ⁴	\$1,000.. 20 253
Legal services ⁴	\$1,000.. 8 770
Accounting, auditing, and bookkeeping services ⁴	\$1,000.. 10 538
Advertising and promotional services ⁴	\$1,000.. 12 378
Expensed computer hardware and supplies and purchased computer services ⁴	\$1,000.. 12 756
Refuse removal (including hazardous waste) services ⁴	\$1,000.. 8 959
Management consulting and administrative services ⁴	\$1,000.. 15 206
Taxes and license fees ⁴	\$1,000.. 30 454
All other expenses ⁴	\$1,000.. 333 334

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Based on 2002 Annual Survey of Manufactures (ASM) sample data.

⁵A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 4. Industry Statistics by Employment Size: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E ¹	All establishments ²	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
332722, Bolt, nut, screw, rivet, and washer manufacturing											
All establishments	2	964	44 761	1 794 941	33 332	69 335	1 155 310	4 451 998	3 329 812	7 782 829	'307 194
Establishments with—											
1 to 4 employees	8	205	e	D	D	D	D	D	D	D	D
5 to 9 employees	6	164	1 096	46 375	838	1 737	30 799	107 329	84 659	193 131	'6 331
10 to 19 employees	2	139	1 997	79 338	1 411	2 857	47 483	192 498	132 525	328 689	'12 705
20 to 49 employees	2	216	6 951	262 548	5 114	10 528	163 426	649 601	475 819	1 124 121	'33 909
50 to 99 employees	2	112	7 725	301 007	5 606	11 695	183 259	754 063	707 138	1 446 143	'37 147
100 to 249 employees	1	102	15 393	621 066	11 150	23 061	394 401	1 540 510	1 209 404	2 762 115	'159 572
250 to 499 employees	4	20	6 927	275 095	5 368	11 298	179 365	755 270	496 498	1 254 650	'36 916
500 to 999 employees	—	5	3 188	138 333	2 615	5 671	101 348	313 576	159 039	470 590	14 762
1,000 to 2,499 employees	—	1	g	D	D	D	D	D	D	D	D
2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—
Administrative records ⁴	9	301	1 148	48 683	887	1 883	32 424	114 403	79 184	193 586	'5 757

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1—10 to 19 percent; 2—20 to 29 percent; 3—30 to 39 percent; 4—40 to 49 percent; 5—50 to 59 percent; 6—60 to 69 percent; 7—70 to 79 percent; 8—80 to 89 percent; 9—90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 5. Industry Statistics by Primary Product Class Specialization: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments ¹	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ²	Payroll (\$1,000)	Number ²	Hours (1,000)	Wages (\$1,000)				
332722	Bolt, nut, screw, rivet, and washer manufacturing	964	44 761	1 794 941	33 332	69 335	1 155 310	4 451 998	3 329 812	7 782 829	'307 194
3327221	Aircraft fasteners, except plastics (including aerospace) (meet specifications for flying vehicles)...	77	8 535	382 971	6 288	13 488	237 745	851 201	374 844	1 224 991	'29 058
3327223	Externally threaded metal fasteners (except aircraft types)	215	16 600	664 899	12 507	26 063	439 414	1 685 189	1 461 247	3 153 123	'162 304
3327225	Internally threaded metal fasteners (except aircraft types)	54	4 008	156 247	3 074	6 240	102 037	344 460	294 798	640 761	'21 941
3327227	Nonthreaded metal fasteners (except aircraft types)	82	5 937	227 142	4 233	8 444	138 151	587 392	461 188	1 049 048	'38 765
332722A	Products (except fasteners), made by cold-heading (or warm- or hot-heading) processes	52	4 909	177 296	3 691	7 876	116 283	539 381	448 387	983 906	'32 010

¹Includes establishments with payroll at any time during the year.

²Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6a. Products Statistics: 2002 and 1997

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
332722	Bolt, nut, screw, rivet, and washer manufacturing	2002.. N 1997.. N	X X	X X	7 172 324 7 581 822
3327221	Aircraft fasteners, except plastics (including aerospace) (meet specifications for flying vehicles)	2002.. N 1997.. N	X X	X X	1 178 676 1 208 605
33272211	Aircraft fasteners, except plastics (including aerospace) (meet specifications for flying vehicles)	2002.. N 1997.. N	X X	X X	1 087 258 1 161 743
3327221101	Aircraft bolts, except plastics (including aerospace), less than 161 KSI tensile (meets specifications for flying vehicles)	2002.. 23 1997.. 26	X X	X X	125 309 140 369
3327221106	Aircraft bolts, except plastics (including aerospace), 161 KSI tensile or more (meets specifications for flying vehicles)	2002.. 23 1997.. 30	X X	X X	292 587 248 563
3327221115	Aircraft screws and studs, except plastics (including aerospace) (meets specifications for flying vehicles)	2002.. 31 1997.. 25	X X	X X	121 101 186 530
3327221145	Aircraft locknuts, except plastics (including aerospace), including flanged locknuts (meets specifications for flying vehicles)	2002.. 20 1997.. 15	X X	X X	193 072 213 307
3327221159	Other internally threaded aircraft fasteners, except plastics (including aerospace), including flanged nuts (all types except flanged locknuts), hex square nuts (all types) and sheet metal fasteners	2002.. 19 1997.. 17	X X	X X	170 440 100 631
3327221172	Aircraft washers, except plastics (including aerospace), all types	2002.. 8 1997.. 15	X X	X X	25 186 25 357
3327221178	Aircraft rivets, except plastics (including aerospace), all types	2002.. 15 1997.. 10	X X	X X	104 360 171 579
3327221184	Aircraft pins, except plastics (including aerospace), all types	2002.. 23 1997.. 16	X X	X X	55 203 75 407
3327221Y	Aircraft fasteners, except plastics (including aerospace) (meet specifications for flying vehicles), nsk	2002.. N 1997.. N	X X	X X	91 418 46 862
3327221YVV	Aircraft fasteners, except plastics (including aerospace) (meet specifications for flying vehicles), nsk	2002.. N 1997.. N	X X	X X	91 418 46 862
3327223	Externally threaded metal fasteners (except aircraft types)	2002.. N 1997.. N	X X	X X	2 781 711 3 085 720
33272231	Externally threaded metal fasteners (except aircraft types)	2002.. N 1997.. N	X X	X X	2 518 069 2 889 071
3327223111	Mine roof bolts	2002.. 15 1997.. 14	X X	X X	110 825 159 116
3327223122	Hex bolts, including heavy, tap-and-joint (excluding high-strength structural and aircraft types)	2002.. 40 1997.. 66	X X	X X	426 706 366 056
3327223133	Other metal bolts, including square, round, plow, high-strength structural, and bent bolts (except aircraft types)	2002.. 75 1997.. 93	X X	X X	538 032 459 277
3327223144	Cap, set, machine, lag, flange, and self-locking screws (except aircraft types)	2002.. 77 1997.. 105	X X	X X	502 504 699 957
3327223155	Tapping screws (including fillister, flat, hex, oval, pan, and truss) and wood screws (including flat, oval, and round) (except aircraft types)	2002.. 46 1997.. 60	X X	X X	379 940 531 301
3327223199	Other externally threaded metal fasteners, including studs (except aircraft types)	2002.. 75 1997.. 121	X X	X X	560 062 673 364
3327223Y	Externally threaded metal fasteners (except aircraft types), nsk	2002.. N 1997.. N	X X	X X	263 642 196 649
3327223YVV	Externally threaded metal fasteners (except aircraft types), nsk	2002.. N 1997.. N	X X	X X	263 642 196 649
3327225	Internally threaded metal fasteners (except aircraft types)	2002.. N 1997.. N	X X	X X	651 206 858 123
33272251	Internally threaded metal fasteners (except aircraft types)	2002.. N 1997.. N	X X	X X	572 747 776 816
3327225104	Hex nuts, including flanges, double chamfered, washer face, flat, jam, slotted, thick, castle, heavy, machine, and locking (except aircraft types)	2002.. 52 1997.. 70	X X	X X	251 376 288 131
3327225129	Square nuts (including flat, washer, crowned, heavy, track, sleeve, and machine), sheet metal nuts, weld nuts, wing nuts, nut retainers, etc. (except aircraft types)	2002.. 18 1997.. 25	X X	X X	28 734 46 121
3327225189	Other internally threaded metal fasteners, including flanged nuts and locknuts (except aircraft types)	2002.. 45 1997.. 59	X X	X X	292 637 442 564
3327225Y	Internally threaded metal fasteners (except aircraft types), nsk	2002.. N 1997.. N	X X	X X	78 459 81 307
3327225YVV	Internally threaded metal fasteners (except aircraft types), nsk	2002.. N 1997.. N	X X	X X	78 459 81 307
3327227	Nonthreaded metal fasteners (except aircraft types)	2002.. N 1997.. N	X X	X X	949 258 970 248
33272271	Nonthreaded metal fasteners (except aircraft types)	2002.. N 1997.. N	X X	X X	833 429 912 228
3327227109	Solid rivets (except aircraft types)	2002.. 38 1997.. 46	X X	X X	89 006 117 567

See footnotes at end of table.

Table 6a. Products Statistics: 2002 and 1997—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
332722	Bolt, nut, screw, rivet, and washer manufacturing—Con.				
3327227	Nonthreaded metal fasteners (except aircraft types)—Con.				
33272271	Nonthreaded metal fasteners (except aircraft types)—Con.				
3327227115	Tubular, split (including rivet caps) and blind rivets (except aircraft types)	2002.. 14	X	X	148 851
		1997.. 28	X	X	190 198
3327227135	Washers (except aircraft types)	2002.. 27	X	X	157 921
		1997.. 44	X	X	176 387
3327227179	Other nonthreaded metal fasteners, including pins (except aircraft types)	2002.. 52	X	X	437 651
		1997.. 75	X	X	428 076
3327227Y	Nonthreaded metal fasteners (except aircraft types), nsk	2002.. N	X	X	115 829
		1997.. N	X	X	58 020
3327227YVW	Nonthreaded metal fasteners (except aircraft types), nsk	2002.. N	X	X	115 829
		1997.. N	X	X	58 020
332722A	Products (except fasteners), made by cold-heading (or warm- or hot-heading) processes	2002.. N	X	X	1 001 893
		1997.. N	X	X	N
332722A1	Products (except fasteners), made by cold-heading (or warm- or hot-heading) processes	2002.. N	X	X	1 001 881
		1997.. N	X	X	N
332722A105	Aircraft parts (except fasteners), made by cold-heading (or warm- or hot-heading) processes	2002.. 12	X	X	47 552
		1997.. N	X	X	N
332722A115	Automotive parts (except fasteners), made by cold-heading (or warm- or hot-heading) processes	2002.. 40	X	X	750 659
		1997.. N	X	X	N
332722A135	Parts for household appliances (except fasteners), including radio and television, made by cold-heading (or warm- or hot-heading) processes	2002.. 8	X	X	25 315
		1997.. N	X	X	N
332722A198	Turnbuckles and hose clamps, made by cold-heading (or warm- or hot-heading) processes	2002.. 12	X	X	115 830
		1997.. N	X	X	N
332722A199	Other products (except fasteners), made by cold-heading (or warm- or hot-heading) processes	2002.. 29	X	X	62 525
		1997.. N	X	X	N
332722AY	Products (except fasteners), made by cold-heading (or warm- or hot-heading) processes, nsk	2002.. N	X	X	12
		1997.. N	X	X	N
332722AYVW	Products (except fasteners), made by cold-heading (or warm- or hot-heading) processes, nsk	2002.. N	X	X	12
		1997.. N	X	X	N
332722W	Bolt, nut, screw, rivet, and washer manufacturing, nsk, total	2002.. N	X	X	609 580
		1997.. N	X	X	600 381
332722WY	Bolt, nut, screw, rivet, and washer manufacturing, nsk, total	2002.. N	X	X	609 580
		1997.. N	X	X	600 381
332722WYVW	Bolt, nut, screw, rivet, and washer manufacturing, nsk, for nonadministrative-record establishments	2002.. N	X	X	422 258
		1997.. N	X	X	428 559
332722WYVY	Bolt, nut, screw, rivet, and washer manufacturing, nsk, for administrative-record establishments	2002.. N	X	X	187 322
		1997.. N	X	X	171 822

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6b. **Product Class Shipments for Selected States: 2002 and 1997**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3327221	Aircraft fasteners, except plastics (including aerospace) (meet specifications for flying vehicles)	
	United States	2002 .. 1 178 676
	.....	1997 .. 1 208 605
	California	2002 .. 786 112
	.....	1997 .. 985 295
	Connecticut	2002 .. 17 377
	.....	1997 .. 13 987
	Illinois	2002 .. 52 657
	.....	1997 .. 6 664
	Michigan	2002 .. 14 347
	.....	1997 .. 6 671
	New York	2002 .. 9 461
	.....	1997 .. 13 673
	Ohio	2002 .. 86 972
	.....	1997 .. 10 072
	Texas	2002 .. 6 280
	.....	1997 .. N
3327223	Externally threaded metal fasteners (except aircraft types)	
	United States	2002 .. 2 781 711
	.....	1997 .. 3 085 720
	Alabama	2002 .. 135 197
	.....	1997 .. 82 131
	California	2002 .. 37 265
	.....	1997 .. 44 602
	Connecticut	2002 .. 44 505
	.....	1997 .. 47 074
	Florida	2002 .. 9 856
	.....	1997 .. 17 655
	Illinois	2002 .. 680 970
	.....	1997 .. 840 873
	Kentucky	2002 .. 51 457
	.....	1997 .. 40 317
	Massachusetts	2002 .. 83 530
	.....	1997 .. 50 737
	Michigan	2002 .. 486 596
	.....	1997 .. 543 216
	Missouri	2002 .. 4 340
	.....	1997 .. 22 699
	New Jersey	2002 .. 14 594
	.....	1997 .. 24 741
	New York	2002 .. 35 735
	.....	1997 .. 90 036
	North Carolina	2002 .. 9 057
	.....	1997 .. N
	Ohio	2002 .. 296 902
	.....	1997 .. 401 588
	Pennsylvania	2002 .. 188 230
	.....	1997 .. 191 293
	Rhode Island	2002 .. 13 637
	.....	1997 .. 12 391
	Tennessee	2002 .. 18 388
	.....	1997 .. 31 399
	Texas	2002 .. 89 653
	.....	1997 .. 116 771
	Virginia	2002 .. 85 903
	.....	1997 .. 91 916
3327225	Internally threaded metal fasteners (except aircraft types)	
	United States	2002 .. 651 206
	.....	1997 .. 858 123
	Alabama	2002 .. 5 770
	.....	1997 .. N
	California	2002 .. 35 674
	.....	1997 .. 58 565
	Connecticut	2002 .. 19 962
	.....	1997 .. 30 517
	Illinois	2002 .. 75 448
	.....	1997 .. 73 650
	Indiana	2002 .. 79 304
	.....	1997 .. 71 161
	Massachusetts	2002 .. 6 812
	.....	1997 .. 9 753
	Michigan	2002 .. 90 878
	.....	1997 .. 173 269
	New Jersey	2002 .. 9 669
	.....	1997 .. 14 536
	New York	2002 .. 15 787
	.....	1997 .. 17 058
	Ohio	2002 .. 81 893
	.....	1997 .. 112 842
	Pennsylvania	2002 .. 64 397
	.....	1997 .. 103 062
	Texas	2002 .. 50 885
	.....	1997 .. 25 369
	Wisconsin	2002 .. 12 124
	.....	1997 .. 40 515
3327227	Nonthreaded metal fasteners (except aircraft types)	
	United States	2002 .. 949 258
	.....	1997 .. 970 248
	California	2002 .. 11 411
	.....	1997 .. 34 267
	Connecticut	2002 .. 18 765
	.....	1997 .. 98 736
	Georgia	2002 .. 7 726
	.....	1997 .. N
	Illinois	2002 .. 166 450
	.....	1997 .. 170 105
	Indiana	2002 .. 4 356

See footnotes at end of table.

Table 6b. **Product Class Shipments for Selected States: 2002 and 1997—Con.**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3327227	Nonthreaded metal fasteners (except aircraft types)—Con.	
	United States—Con.	
	1997..	4 717
	2002..	81 551
	1997..	N
	2002..	22 273
	1997..	23 755
	2002..	124 050
	1997..	50 085
	2002..	16 391
	1997..	30 485
	2002..	5 774
	1997..	N
	2002..	45 764
	1997..	54 670
	2002..	37 464
	1997..	62 882
	2002..	32 952
	1997..	35 230
	2002..	6 772
	1997..	N
	2002..	9 949
	1997..	N
	2002..	158 685
	1997..	107 236
332722A	Products (except fasteners), made by cold-heading (or warm- or hot-heading) processes	
	United States.....	1 001 893
	1997..	N
	2002..	58 506
	1997..	N
	2002..	12 032
	1997..	N
	2002..	117 777
	1997..	N
	2002..	6 622
	1997..	N
	2002..	490 227
	1997..	N
	2002..	61 904
	1997..	N

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 7. Materials Consumed by Kind: 2002 and 1997

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
332722	Bolt, nut, screw, rivet, and washer manufacturing		
00900001	Total materials .....2002..	X	2 397 266
	.....1997..	X	2 559 916
33200005	Fabricated metal products, including forgings .....2002..	X	176 963
	.....1997..	X	158 418
33100035	Castings, rough and semifinished.....2002..	X	2 540
	.....1997..	X	5 874
33120071	Steel bars and bar shapes (excluding castings, forgings, and fabricated metal products) .....2002..	X	149 430
	.....1997..	X	215 552
33120016	Steel sheet and strip (including tinplate) .....2002..	X	74 902
	.....1997..	X	N
33120025	Steel wire and wire products .....2002..	X	579 991
	.....1997..	X	854 999
33120035	All other steel shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	150 095
	.....1997..	X	67 178
33142107	Copper and copper-base alloy rod, bar, and bar shapes (excluding castings, forgings, and fabricated metal products) .....2002..	X	42 164
	.....1997..	X	24 676
33142113	All other copper and copper-base alloy shapes and forms (excluding castings, forgings, fabricated metal products, rods, bars, mechanical wire, sheet, plate, and strip) .....2002..	X	26 986
	.....1997..	X	N
33131601	Aluminum and aluminum-base alloy extruded shapes (extruded rod, bar, pipe, tube, etc.) .....2002..	X	D
	.....1997..	X	N
33100059	All other aluminum and aluminum-base alloy shapes and forms (wire, rolled rod and bar, powder, welded tubing, etc.) .....2002..	X	25 843
	.....1997..	X	54 785
33100082	Other nonferrous metal shapes and forms (excluding aluminum and aluminum-base alloy and copper and copper-base alloy castings, forgings, and fabricated metal products) .....2002..	X	67 757
	.....1997..	X	N
32221001	Paperboard containers, boxes, and corrugated paperboard .....2002..	X	27 261
	.....1997..	X	33 327
33510000	Special dies, tools, die sets, jigs, and fixtures (excluding cutting tools for machine tools) .....2002..	X	D
	.....1997..	X	172 960
00970099	All other materials and components, parts, containers, and supplies.....2002..	X	485 257
	.....1997..	X	484 924
00971000	Materials, ingredients, containers, and supplies, nsk .....2002..	X	470 338
	.....1997..	X	487 223

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.